**Biological Molecules Review Quiz**

1. Cellulose is an example of a…

a) Monosaccharide

b) Disaccharide

c) Polysaccharide

e) Lipid

2. Phospholipids contain how many hydrophobic fatty acid chains?

a) 1

b) 2

c) 3

d) It can vary

3. A triglyceride is a…

a) Fatty acid

b) Fat

c) Phospholipid

d) Steroid

e) Wax

4. Which nitrogenous base group is not included in RNA?

a) Adenine

b) Guanine

c) Cytosine

d) Uracil

e) Thymine

5. Which of these is not an essential amino acid?

a) Phenylalanine

b) Leucine

c) Threonine

d) Proline

6. Explain the four different levels of structures of proteins. What are they called? How does each continue to the final shape and functioning of the protein? (4)

7. Explain the difference between alpha glucose and beta glucose. Include a drawing if needed. (2)

ANSWER KEY:

1C 2B 3B 4E 5D

6. The primary structure is the unique linear sequence of amino acids in a chain. The secondary structure determines if the polypeptide chain is alpha helix or beta pleated. The tertiary structure determines the overall 3D shape of a protein when bonding interactions occur among amino acid R groups. Some examples are hydrophobic interactions and disulfide bridges. The quaternary structure is when different polypeptide chains come together to form a final, functional protein. The shape of a protein contributes to its function – small globular proteins will be able to carry substances, for example.

7. Whether a glucose is alpha glucose or beta glucose depends on the orientation of the –OH group. In alpha glucose, the –OH group is oriented downwards while attached to carbon 1 and in beta glucose, the –OH group is oriented upwards while attached to carbon 1.